

precisely similar to my own, which allowed its pearl-like drops to escape from the extremities of its leaves.

Is the remarkable and sometimes violent movement of my *Colocasia* due to an exception—namely, the accidentally imperforate condition of the stomata, and the incessant shocks of an imprisoned sap?

On the other hand, M. Musset says that the leaves of his *Colocasia* present violet reflections on their upper surface; mine is throughout of a pale green. Can we have studied different varieties?

M. Musset carried on his cultivation in the open ground; I mine in a hot stove: the difference of the stations may have had some influence upon the results. Might there not be, also, in these energetic spontaneous movements some transformation of heat into motion, just as in the Arums there is a development of heat at the moment when fecundation is about to take place.—*Comptes Rendus*, April 22, 1867, pp. 805–808.

Characters of new Fishes. By Dr. F. STEINDACHNER.

Ctenotrypauchen, g. n.—Distinguished from *Trypauchen* by its large cycloid scales, an elevated dentated ridge on the occiput, and only three branchiostegal rays.

C. chinensis.—Length of head contained about $5\frac{2}{3}$ times, depth of head about $6\frac{1}{3}$ times in the total length. Eyes extremely small, scarcely visible externally; body elongated, ribbon-like. Dorsal, anal, and caudal fins united into a single fin. The dorsal contains 6 spines and 46 jointed rays, the anal 1 spine and 42 jointed rays. Along the lateral line 46 scales. Colour light yellowish brown, with a narrow reddish-violet band along the lateral line. China.

Heros Troschelii.—Distinguished from *H. urophthalmus* by the greater number of dorsal spines (16), and by the lower jaw overhanging the upper only on the sides. Mexico.

Ctenolabrus Brandaonis.—Dorsal spines 19; 5–6 rows of scales above the lateral line; depth of body contained $3\frac{2}{3}$ times, and length of head $4\frac{1}{4}$ times in the total length; 5 rows of scales beneath the cheeks; 37–38 scales along the lateral line. Brazil.

Batrachus liberiensis.—Body completely and distinctly scaled; second dorsal with 25, anal with 22 jointed rays; head one-third the length of the body (without the caudal); breadth of the head six-sevenths of its length. No tentacle over the eye. Liberia.

Caranx macrops.—Forms a transition towards *Vomer* by the small elevation of the first dorsal; the maxillary teeth lie in several rows one behind the other, and are exceedingly delicate and fine, with the exception of the larger cutting-teeth in the outer row. Depth of body contained $3\frac{1}{2}$ times, and length of head $4\frac{1}{2}$ times in the total length. Body finely scaled; 40 scutes along the lateral line; 8 transverse bands on the sides of the body. Liberia.

Arius Capellonis.—Nearly allied to *A. Heudelotii*, Val.; but the occipital region is much more strongly arched, the dorsal and anal fins are considerably higher, and the adipose fin much longer than

in that species. The greatest depth of body is contained $4\frac{1}{2}$ times, the length of the head nearly $3\frac{2}{3}$ times, and the breadth of the head almost 5 times in the total length. Liberia.

Balistes liberiensis exhibits a long, produced head; the profile of the head runs in a straight line to the muzzle. The length of the head is contained $3\frac{1}{2}$ times and the greatest depth of body twice and one-fifth in the total length, and the eye $4\frac{4}{5}$ times in that of the head. The body has large blue-black spots; the head is adorned with smaller bluish-green spots. 1st D. 3; 2nd D. 25; A. 27; P. 13. Liberia.—*Anzeiger der K. Akad. der Wiss. in Wien*, March 14, 1867, pp. 63–64.

On some points in the Anatomy of the Sipunculi.

By S. JOURDAIN.

The researches of which I here give the most prominent results relate to the following species:—*Sipunculus gigas*, *S. obscurus*, *S. vulgaris*, and *S. punctatissimus*.

The integuments are destitute of those calcareous corpuscles, sometimes so curious in their form, which are met with in great quantities in the *Holothuræ*. The spinules which roughen the anterior part of the body of *S. obscurus* and *S. punctatissimus* are dependent upon the epidermic envelope. Glandulæ exist in great numbers in the skin of *S. obscurus*, *vulgaris*, and *punctatissimus*, and cause it to appear finely punctate.

In *S. gigas* the general cavity communicates with the exterior by an orifice furnished with a sphincter, situated at the posterior extremity of the body. Two branches springing from the fusiform ganglion, which terminates the nervous chain, surround this orifice with a nearly complete ring. A similar orifice is wanting in the three other species.

The ova or spermatozoids (for the sexes are not distinct) float in the liquid which fills the general cavity. In the last three species, they can issue only by a bilabiate pore placed upon the neck of the two cæca which open upon the sides of the dorsal region at the level of the anus. In *S. gigas* there is a pore similarly situated; but it is possible that the products of generation may be expelled by the posterior orifice, a sort of peritoneal canal in these Annulata. This well-ascertained arrangement seems to me to be of sufficient importance to justify the creation of a new generic group, to which I propose to give the name of *Sipunculoporus*; this genus would at present include only a single species, *Sipunculoporus gigas*.

I shall now indicate an anatomical peculiarity which is perhaps connected with the presence of the posterior orifice—namely, the existence of tendinous fræna, or very slender threads, furnished with vibratile cilia, which connect the spiral convolutions of the digestive tube with the walls of the body, and seem to be intended to hold the former in their place.

The liquid of the general cavity contains two kinds of globules:—(1) colourless discoid corpuscles, very like the globules of human